# Ahura Energy Concentrating System for Lowest Cost Highest Reliability

**Solar & Thermal Applications** 

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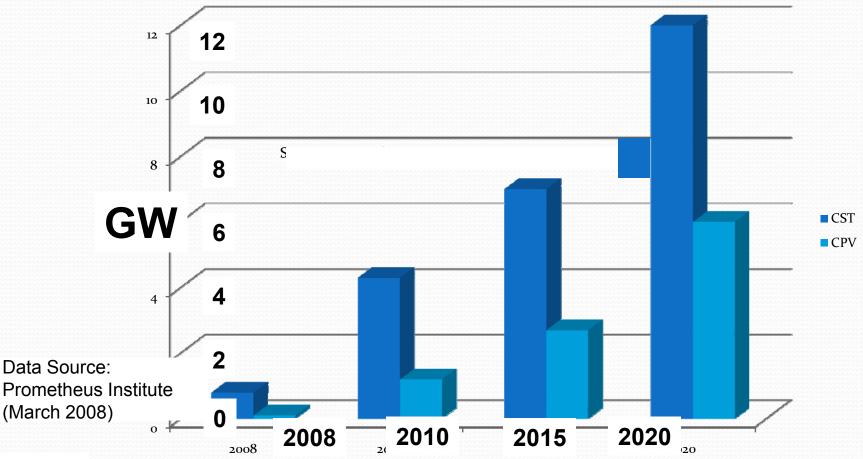
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Silicon Valley Based (Location: Saratoga, CA) Incorporated 10/2006



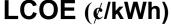
# Fast Growing Concentrating Solar Thermal (CST) and Concentrating Solar PV (CPV) Market

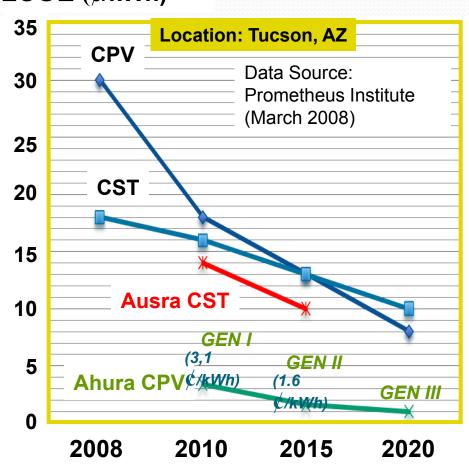
#### Several \$B already contracted





#### The Need of Lower Cost Solution





- Multiple emerging concentrating solar power system suppliers exist for both CST and CPV implementations
  - ...but projections for a LCOE of less than 10¢/kwh are not probable until 2015 with their systems
- Key competitors, such as Abengoa,
   Ausra, have established manufacturing facilities and operating farms
- Ahura's technology:
  - 80% Less \$ Than closest Competition
  - 40% Less \$ Than Grid Parity \$

...by tailoring the configuration for each major customer they can still differential themselves in competition for solar farms



# Ahura Energy Concentrating System to Fulfill the Need

- Provides customers with clean energy with production cost less than current available CST and CPV, coal/natural gas generation → i.e. < 5¢/kWh</p>
  - Implementations for both CPV and CST plants
  - Can be used for plant expansion as a replacement product or new solar plant installations
  - Allows product improvement for customers that both develop systems and manage solar production plants
- Patent pending technology
  - Filed for patent application with 60 claims
  - Securing sub-component manufacturing partners



## The Benefits Offered by Ahura Energy

- CST And CPV system suppliers which have a value proposition of:
  - Present system replacement with lower LCOE
  - Reduction of their own development costs with purchase of system assembly
  - Options for use of next generation systems
- Customers will be shown development system that is specific to a replacement of their present implementations
- Competitors tend to be solar system suppliers with costly custom solutions



#### **Business Model**

#### Business Concept

- OEM sales for concentrating solar power generators and suppliers
- Use cash generated & PPAs to become system integrator
- Licensing to present/future CPV and CST system companies

#### Value Proposition

- At least 80% Lower cost of energy produced than any competitor
  - Uses flat inexpensive mirrors/lens instead of parabolic ones
  - Eliminates motors for dual-axis tracker systems
  - Reduces bill of material (BOM) significantly
- Significant increased reliability, fault tolerant design

#### Key strategies for today and tomorrow

- System output compatibility with initial OEM customer's products
- Use sales generated to finance growth as future system's integrator



## **Strategic Relationships**

# Incubating at and working closely with ITRI International (a subsidiary of ITRI) in Silicon Valley

Verification & Validation	Outsourcing Manufacturing	Internal
<ul> <li>NREL</li> <li>Fraunhofer Institute</li> <li>Sandia National Labs</li> <li>Stanford University</li> <li>EPRI</li> <li>Others</li> </ul>	<ul> <li>Electronic Board</li> <li>Flat Glass</li> <li>Assemblies</li> <li>Single-Axis Tracker Platform</li> </ul>	<ul> <li>μ Controller</li> <li>Systems</li> <li>Final Electrical/Mechanical Assembly</li> </ul>



### **Development Status**

- Filed key patent application
- Have working prototype
- Develop pre production prototype one year
  - Expected testing to start in 6 months after funding.
  - Engineering staff identified
  - Detailed project plan in development
  - Detailed engineering design completed



## **Manufacturing Milestone**

...in one year, starting Nov. 2008 (expected)

